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JENKINS, WILSON, TAYLOR & HUNT, P. A.			ELAHEE, MD S	
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DURHAM, NC 27707			2614	

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/658,522

Applicant(s)

BENEDYK ET AL.

Examiner

Md S. Elahee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 22-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 22-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. This action is responsive to an amendment filed on 08/27/2004. Claims 22-39 are pending. Claims 1-21 have been already cancelled.

### ***Response to Arguments***

2. Applicant's arguments filed on 08/27/2004 Remarks have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Objections***

3. Claim 34 is objected to because of the following informalities: regarding claim 34, the phrase 'subsecond switchover' makes the claim indefinite since it appears that the phrase 'subsecond switchover' would be 'subsequent switchover'. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary

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skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 22, 24-27, 29-32, 34 and 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kaplan** et al. (U.S. Patent No. 6,993,011) in view of **Kung** et al. (U.S. 6,570,855).

Regarding claims 22,32,36, with respect to Figures 1,2,4, **Kaplan** teaches a session manager [i.e., link interface module (LIM)] (fig.4, item 442) receiving SS7 call signaling messages and identifying an SS7 call signaling message relating to establishment of a call as requiring processing by a call manager server [i.e., call server] (fig.4, item 445) and selecting a call server for processing the SS7 call signaling message (col.15, lines 48-57);

a call manager [i.e., first call server module] (fig.4, item 445) receiving the SS7 call signaling message from the LIM, the first call server module storing connection status and call state information regarding calls in progress, thereby functioning as a primary call server (col.8, lines 54-64, col.15, lines 48-57); and

However, **Kaplan** does not specifically teach the first call server module and second call server module storing connection status and call state information regarding calls in progress in a media gateway and performing media gateway call management functions for establishing the call in the media gateway. **Kung** teaches the first call server module and second call server module storing connection status and call state information regarding calls in progress in a signaling gateway [i.e., media gateway] and performing media gateway call management functions for establishing the call in the media gateway (fig.5,6,9-11; col.7, lines 7-15, col.26, lines 55-67, col.27, lines 1-2,8-11, 31-49, col.30, lines 49-67, col.31, lines 1-17). Thus, it would

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have been obvious to one of ordinary skill in the art at the time the invention was made to modify **Kaplan** to incorporate the first call server module and second call server module storing connection status and call state information regarding calls in progress in a media gateway and performing media gateway call management functions for establishing the call in the media gateway in order to use a second call manager as a backup as well as set up a connection with a media gateway to route a particular call.

**Kaplan** further teaches that a call manager server [i.e., call server] (fig.4, item 445) manages traffic and balance network loads (col.9, lines 3-4). However, **Kaplan** does not specifically teach a second call server module functioning as a backup call server wherein the second call server module switches operation to become the primary call server for the call in response to failure of the first call server module. **Kung** teaches a second call server module functioning as a backup call server wherein the second call server module switches operation to become the primary call server for the call in response to failure of the first call server module (fig.9-11; col.7, lines 7-15, col.30, lines 49-67, col.31, lines 1-17). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify **Kaplan** to incorporate second call server module functioning as a backup call server wherein the second call server module switches operation to become the primary call server for the call in response to failure of the first call server module in order to provide a back up call manager in case of failure of an active call manager to handle a call.

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Regarding claims 24, **Kaplan** does not specifically teach that the switching occurs without transfer of the call state information from the first call server module to the second call server module. **Kung** teaches that the switching occurs without transfer of the call state information from the first call server module to the second call server module (fig.9-11; col.7, lines 7-15, col.30, lines 49-67, col.31, lines 1-17). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify **Kaplan** to incorporate the feature of switching without transfer of the call state information from the first call server module to the second call server module in order to provide a transfer for only the required information.

Regarding claim 25, **Kaplan** teaches that the call state and connection status information includes at least one call table for storing call-related information (fig.9-16; col.8, lines 54-64, col.12, lines 35-67).

Claim 26 is rejected for the same reasons as discussed above with respect to claim 22. Furthermore, **Kaplan** teaches that at least one call table includes specific routing information for the call and an endpoint table storing endpoint information for a network element (col.8, lines 54-64).

Claim 27 is rejected for the same reasons as discussed above with respect to claim 22. Furthermore, **Kaplan** teaches that at least one call table includes a connection table for storing connection information for connections in the network (col.8, lines 54-64).

Claim 29 is rejected for the same reasons as discussed above with respect to claim 22. Furthermore, **Kaplan** does not specifically teach detecting failure of the first call server module. **Kung** teaches detecting failure of the first call server module (fig.9-11; col.7, lines 7-15, col.30, lines 49-67, col.31, lines 1-17). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify **Kaplan** to incorporate detecting failure of the first call server module in order to provide status of a call manager whether the session manager needs to switch the call to a back up call manager so that the back up call manager can handle the call.

Regarding claims 30, **Kaplan** teaches that storing call state information includes storing parameters extracted from a sequence of ISUP messages required to set up or tear down the first call (col.8, lines 54-64, col.15, lines 48-57).

Claim 31 is rejected for the same reasons as discussed above with respect to claim 22. Furthermore, **Kaplan** teaches that operating the primary call server mode includes formulating instructions for setting up or tearing down the first call and forwarding the instructions to an appropriate network element [i.e., transporter module] (col.15, lines 48-57).

Regarding claim 34, **Kaplan** teaches that the link interface module and the first and call server module comprising inherently printed circuit boards having an application processor and a communication processor mounted thereon, the printed circuit boards being connected to a

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common bus and communicating with each other via the interface (col.8, lines 54-64, col.15, lines 48-57).

However, **Kaplan** does not specifically teach the second call server modules comprising printed circuit boards having an application processor and a communication processor mounted thereon, the printed circuit boards being connected to a common bus and communicating with each other via the interface, thereby allowing subsecond switchover between the first and second call server modules. **Kung** teaches the second call server modules comprising printed circuit boards having an application processor and a communication processor mounted thereon, the printed circuit boards being connected to a common bus and communicating with each other via the interface, thereby allowing subsecond switchover between the first and second call server modules (fig.9-11; col.7, lines 7-15, col.30, lines 49-67, col.31, lines 1-17). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify **Kaplan** to incorporate the second call server modules comprising printed circuit boards having an application processor and a communication processor mounted thereon, the printed circuit boards being connected to a common bus and communicating with each other via the interface, thereby allowing subsecond switchover between the first and second call server modules in order to perform rapid switching of a call from active call manager to a backup call manager.

Claim 37 is rejected for the same reasons as discussed above with respect to claims 22 and 34.



Regarding claim 38, **Kaplan** does not specifically teach generating media gateway control commands based on the information selected by the first call server module and forwarding the media gateway control commands to the media gateway. **Kung** teaches generating media gateway control commands based on the information selected by the first call server module and forwarding the media gateway control commands to the media gateway (fig.5,6; col.26, lines 55-67, col.27, lines 1-2, 31-33). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify **Kaplan** to incorporate generating media gateway control commands based on the information selected by the first call server module and forwarding the media gateway control commands to the media gateway in order to make an appropriate connection.

Regarding claim 39, **Kaplan** does not specifically teach performing media gateway call management functions includes selecting endpoints in the media gateway for the call. **Kung** teaches performing media gateway call management functions includes selecting endpoints in the media gateway for the call (fig.5,6; col.26, lines 55-67, col.27, lines 1-2). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify **Kaplan** to incorporate performing media gateway call management functions includes selecting endpoints in the media gateway for the call in order to make a connection appropriate for a particular call.

6. Claims 22-27, 29-34 and 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chong** et al. (U.S. Patent No. 6,205,557) in view of **Kung** et al. (U.S. 6,570,855).

Regarding claims 22,32,36, **Chong** teaches an interface server [i.e., link interface module (LIM)] for receiving signaling message [i.e., SS7 call signaling message] and for identifying signaling message [i.e., at least one parameter in the SS7 message] relating to establishment of a call as requiring processing by a call server and for selecting a call server for processing the signaling message (fig.3; col.6, lines 11-44);

an active call server [i.e., first call server module] for receiving the SS7 call signaling message from the link interface module and for functioning as a primary call server (fig.3; col.6, lines 11-44);

a standby call server [i.e., second call server module] for storing the call information and functioning as a backup call server for the call, wherein second call server module is adapted to switch operation to become the primary call server for the call in response to failure of the first call server module (abstract; fig.3; col.1, lines 36-53, col.6, lines 11-44);

However, **Chong** does not specifically teach the first call server module and second call server module storing connection status and call state information regarding calls in progress in a media gateway and performing media gateway call management functions for establishing the call in the media gateway. **Kung** teaches the first call server module and second call server module storing connection status and call state information regarding calls in progress in a signaling gateway [i.e., media gateway] and performing media gateway call management functions for establishing the call in the media gateway (fig.5,6,9-11; col.7, lines 7-15, col.26, lines 55-67, col.27, lines 1-2,8-11, 31-49, col.30, lines 49-67, col.31, lines 1-17). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to

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modify **Chong** to incorporate the first call server module and second call server module storing connection status and call state information regarding calls in progress in a media gateway and performing media gateway call management functions for establishing the call in the media gateway in order to use a second call manager as a backup as well as set up a connection with a media gateway to route a particular call.

Regarding claim 23, **Chong** teaches that the switching from backup to primary call server module occurs in less than one second (abstract; fig.3, fig.5; col.4, lines 10-65).

Regarding claims 24, **Chong** teaches that the switching occurs without transfer of the call state information from the first call server module to the second call server module (abstract; fig.3, fig.5; col.3, lines 56-67, col.4, lines 1-65).

Regarding claim 25, **Chong** teaches that the call information [i.e., state information] includes at least one transaction register [i.e., call table] for storing call-related information (abstract; fig.3, fig.5; col.3, lines 56-67, col.4, lines 1-65).

Claim 26 is rejected for the same reasons as discussed above with respect to claim 22. Furthermore, **Chong** teaches that at least one call table includes specific routing information for the call and an endpoint table storing endpoint information for a network element (col.3, lines 56-67).

Claim 27 is rejected for the same reasons as discussed above with respect to claim 22. Furthermore, **Chong** teaches that at least one transaction register [i.e., call table] inherently includes a connection table for storing connection information for connections in the network (col.3, lines 56-67, col.4, lines 1-3).

Claim 29 is rejected for the same reasons as discussed above with respect to claim 22. Furthermore, **Chong** teaches detecting failure of the first call server module (abstract; fig.3; col.1, lines 36-53, col.6, lines 11-44).

Regarding claims 30, **Chong** teaches that storing call state information' and 'signaling messages and responses to complete call connection includes storing parameters extracted from a sequence of ISUP messages required to set up or tear down a call (fig.3, fig.5; col.3, lines 56-67, col.4, lines 1-65).

Claim 31 is rejected for the same reasons as discussed above with respect to claim 22. Furthermore, **Chong** teaches that operating the primary call server mode includes formulating instructions for setting up or tearing down the first call and forwarding the instructions to a network element [i.e., transporter module] (fig.5; col.5, lines 20-32).

Regarding claim 33, **Chong** teaches that the switching operation of the second call server module to the primary mode includes switching the operation within a fraction of one second (abstract; fig.3, fig.5; col.4, lines 10-65, col.5, lines 20-32).

Regarding claim 34, **Chong** teaches that the interface server (i.e., link interface module) and the active and standby call server (i.e., first and second call server modules) each comprising inherently printed circuit boards having an query processor (i.e., application processor) and an interface (i.e., communication processor) mounted thereon, the printed circuit boards being connected to a high speed interface (i.e., common bus) and communicating with each other via the interface, thereby allowing subsecond switchover between the active and standby call server (fig.3, fig.4; col.3, lines 56-67, col.4, lines 1-65).

Regarding claim 37 is rejected for the same reasons as discussed above with respect to claim 22. Furthermore, **Chong** teaches replicating call state and connection status information from the first call server module to the second call server module via a common bus interconnecting the first and second call server modules (abstract; fig.3; col.1, lines 36-53, col.6, lines 11-44).

Regarding claim 38, **Chong** does not specifically teach generating media gateway control commands based on the information selected by the first call server module and forwarding the media gateway control commands to the media gateway. **Kung** teaches generating media gateway control commands based on the information selected by the first call server module and forwarding the media gateway control commands to the media gateway (fig.5,6; col.26, lines 55-67, col.27, lines 1-2, 31-33). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify **Chong** to incorporate generating media gateway

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control commands based on the information selected by the first call server module and forwarding the media gateway control commands to the media gateway in order to make an appropriate connection.

Regarding claim 39, **Chong** does not specifically teach performing media gateway call management functions includes selecting endpoints in the media gateway for the call. **Kung** teaches performing media gateway call management functions includes selecting endpoints in the media gateway for the call (fig.5,6; col.26, lines 55-67, col.27, lines 1-2). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify **Chong** to incorporate performing media gateway call management functions includes selecting endpoints in the media gateway for the call in order to make a connection appropriate for a particular call.

7. Claims 23, 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kaplan et al.** (U.S. Patent No. 6,993,011) in view of **Kung et al.** (U.S. 6,570,855) further in view of **Chong et al.** (U.S. Patent No. 6,205,557).

Regarding claims 23, 33, **Kaplan** in view of **Kung** fails to teach “the switching from backup to primary call server module occurs in less than one second”. **Chong** teaches that the switching from backup to active call server [i.e., primary call server module] occurs in less than one second (abstract; fig.3, fig.5; col.4, lines 10-65). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify **Kaplan** in view of **Kung** to

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incorporate the switching from backup to primary call server module occurring in less than one second in order to reduce the delay for switching.

8. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Chong** et al. (U.S. Patent No. 6,205,557) in view of **Denman** et al. (U.S. Patent No. 6,490,451) further in view of **Haruta** (U.S. Pub. No. 2002/0057782).

Regarding claim 28, **Chong** teaches that the call information includes at least one transaction register for storing call signaling message (col.3, lines 56-67, col.4, lines 1-65; 'transaction register' reads on the claim 'call table' and 'call signaling message' reads on the claim 'call signaling state information for endpoints in the media gateway'). However, **Chong** in view of **Denman** fails to teach "state table". **Haruta** teaches state table (page no.5, paragraph 0099). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify **Chong** in view of **Denman** to allow state table as taught by **Haruta**. The motivation for the modification is to have the state table in order to store an operation state of the call.

9. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Kaplan** et al. (U.S. Patent No. 6,993,011) in view of **Kung** et al. (U.S. 6,570,855) further in view of **Denman** et al. (U.S. Patent No. 6,490,451).

Regarding claim 35, **Kaplan** in view of **Kung** fails to teach “a transporter module operatively associated with the primary call server for generating a media gateway control command and forwarding media gateway control command to the media gateway for setting up in the call in the media gateway”. **Denman** teaches a wireless mobility server (WMS) (i.e., transporter module) operatively associated with the primary call server for generating a media gateway control command and forwarding media gateway control command to the media gateway for setting up in the call in the media gateway (abstract; col.7, lines 38-56, col.15, lines 23-35). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify **Kaplan** in view of **Kung** to incorporate a transporter module operatively associated with the primary call server for generating a media gateway control command and forwarding media gateway control command to the media gateway for setting up in the call in the media gateway in order to present MSC-related, SS7 call control signaling.

10. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Chong et al.** (U.S. Patent No. 6,205,557) in view of **Kung et al.** (U.S. 6,570,855) further in view of **Denman et al.** (U.S. Patent No. 6,490,451).

Regarding claim 35, **Chong** in view of **Kung** fails to teach “a transporter module operatively associated with the primary call server for generating a media gateway control command and forwarding media gateway control command to the media gateway for setting up in the call in the media gateway”. **Denman** teaches a wireless mobility server (WMS) (i.e., transporter module) operatively associated with the primary call server for generating a media



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gateway control command and forwarding media gateway control command to the media gateway for setting up in the call in the media gateway (abstract; col.7, lines 38-56, col.15, lines 23-35). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify **Chong** in view of **Kung** to incorporate a transporter module operatively associated with the primary call server for generating a media gateway control command and forwarding media gateway control command to the media gateway for setting up in the call in the media gateway in order to present MSC-related, SS7 call control signaling.

### *Conclusion*

**11.** The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

**Pullen** et al. (U.S. Patent 6,522,732) teach System and method of preserving stable calls during a split mode operation of telecommunications equipment.

**12.** Any inquiry concerning this communication or earlier communications from the examiner should be directed to Md S. Elahee whose telephone number is (571) 272-7536. The examiner can normally be reached on Mon to Fri from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on (571) 272-7547. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*M. E.*

MD SHAFIUL ALAM ELAHEE

July 9, 2006



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SUPERVISORY PATENT EXAMINER  
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